

IN THE CLAIMS:

Please cancel claims 1-15 and add new claims 16-35.

1. (Cancelled) An improvement in a system for automatically monitoring the operational status of one or more copier machines from a remote location, each copier machine having a copier control computer for determining copier status, comprising means for monitoring status information from the copier control computer, a translator associated with each copier including means to adapt status information from the specific copier machine into uniform status information for transmission to the remote location and means for transmitting information between the translator of each copier and the remote location, said improvement comprising a two component translator, said components to communicate by means for communication, wherein the first component is located within the copier machine and comprises a smart tap, comprising a voltage level converter, means to adapt status information specific to the copier machine it services to uniform status information, and a central processing unit (CPU) to process the status information and transmit and receive communications between the first and second components, and the second component comprises a universal component, not specific copier machine dependent, located external to the copier machine comprising a central processing unit (CPU) which receives information from the first component and transmits said information to the remote location.

2. (Cancelled) The system of Claim 1 further comprising means to poll the translator for each copier machine, to obtain copier machine status information, from the remote location.
3. (Cancelled) The system of Claim 2 wherein the means to poll the translator of each copier machine comprises a scanner.
4. (Cancelled) The system of Claim 2 further comprising a central computer at the remote location to poll, assemble and format the status information from the one or more copier machines.
5. (Cancelled) The system of Claim 4 further comprising a user interface at the remote location wherein a user can review copier status information on command.
6. (Cancelled) The system of Claim 2 further comprising means to vary the polling rate of the specific translators to allow a user to poll all translators at a uniform rate without specific priority to any one translator or polling a priority of one or more translators with a reduced polling rate of the remaining translators.
7. (Cancelled) The system of Claim 1 wherein the means of communication between said components comprises fiber optic cables.
8. (Cancelled) The system of Claim 1 further comprising a non-volatile read only memory in said first component having an identification data pattern which is

transmitted to the second component and on to the remote location with the status

information for identification of the specific copier within a network.

9. (Cancelled) The system of Claim 1 further comprising means to shut down one or more copier machines from the remote location.

10. (Cancelled) The system of Claim 1 further comprising means to provide remote input operation to allow control panel keystrokes to be remotely generated comprising means to input comments at the remote location to be received by the first component of the translator and means to simulate keystrokes within the copier.

11. (Cancelled) The system of Claim 10 wherein the means to input commands at the remote location comprises a keyboard on a central computer.

12. (Cancelled) The system of Claim 10 wherein the means to simulate keystrokes within the copier comprises a set of latches in the first component of the translator aligned in parallel with the copier control keys read by the copier control computer.

13. (Cancelled) The system of Claim 1 wherein the means for transmitting information and commands between the translator for each copier and the remote location is taken from the group comprising telephone lines, hardwiring, fiber optics and RF transmission/reception.

14. (Cancelled) The system of Claim 1 further comprising means to read

keystrokes generated on the copier from the remote location.

15. (Cancelled) The system of Claim 14 wherein the means to read keystrokes generated on the copier from the remote location comprises a predetermined number of latches within the first component of the translator, said latches capturing column sense signals generated by keystrokes on the copier keyboard and at the remote location and read by the copier control computer to activate a specific function, wherein the latches are read by the central processing unit of the first component and evaluated for copier specific information which is transmitted to the remote location.

16. (New) A copier system comprising:

a copier capable of being monitored by a personal computer from a remote location, the copier comprising a control computer controlling the performance of the copier, and a control panel configured to receive data from the control computer; a chip corresponding to the copier, the chip providing an interface for connecting the copier with a bi-directional network, said bi-directional network being capable of connecting the personal computer to a plurality of devices, and a memory device corresponding to the copier, the memory device storing data comprising a special information to identify the copier in the network, the memory device capable of retaining data if power is removed,

wherein the special information when transmitted to the personal computer identifies the copier remotely in the network and enables recognition of the copier by a database manager of the personal computer.

17. (New) The copier system according to claim 16, wherein the chip has first circuitry for converting serial data transmitted from the personal computer into parallel data and converting parallel data transmitted from the copier into serial data, and second circuitry for driving a pair of signal lines according to the converted serial data, the first and second circuitry being incorporated in the chip.

18. (New) The copier system according to claim 16, further comprising the network wherein the network comprises a plurality of lines, each of the plurality of lines having at least a pair of signal lines transmitting asynchronous serial data.

19. (New) The copier system according to claim 18, wherein the plurality of lines comprise four signal lines comprising the pair of signal lines.

20. (New) The copier system according to claim 19, wherein the pair of signal lines comprise a hard wiring.

21. (New) The copier system according to claim 18, wherein the pair of signal lines has high immunity from external noise sources.

22. (New) The copier system according to claim 18, wherein the control computer is mounted on a computer board.

23. (New) The copier system according to claim 18, wherein the control computer and the chip are separate chips.
24. (New) The copier system according to claim 18, wherein the chip comprises a random access memory.
25. (New) The copier system according to claim 18, wherein the chip comprises a microprocessor.
26. (New) The copier system according to claim 25, wherein the microprocessor comprises an address decoder.
27. (New) The copier system according to claims 18, further comprising the personal computer, wherein a condition of the copier and setup parameters, a copy count and error codes of the copier are displayed on a display screen of the personal computer.
28. (New) The copier system according to claims 18, wherein the control panel comprises a light emitting diode.
29. (New) The copier system according to claims 18, wherein the control panel comprises a liquid crystal display.
30. (New) The copier system according to claim 18, wherein the control panel comprises a plurality of keys.
31. (New) The copier system according to claim 18, wherein an error status signal is sent from the control computer to the control panel.

32. (New) A copier system capable of being monitored and controlled by a remote computer, the image forming device comprising:

- a copier machine;
- a computer controller coupled to the copier machine and configured to monitor a status of the copier machine; and
- an interface for connecting the image forming device with the remote computer by a bi-directional communication line connected to the remote computer, the interface comprising:
 - a chip comprising a microprocessor;
 - a nonvolatile memory storing a special information;
 - a parallel-to-serial converter circuit for converting a first parallel data stream into a first serial data stream; and
 - a serial-to-parallel converter circuit for converting a second serial data stream into a second parallel data stream, and
 - a driver circuit capable of transmitting the first serial data stream over the communication line,

wherein the special information identifies the copier and enables recognition of the copier by a database manager operating on the personal computer.

33. (New) The copier system according to claim 32, wherein the microprocessor

comprises an address decoder.

34. (New) The copier system according to claim 32, wherein the remote

computer comprises a personal computer.

35. (New) The copier system according to claim 32, wherein the status of the

copier machine monitored by the computer controller comprises at least one of setup

parameters, a copy count and error codes of the copier, and wherein data representing at

least one of the setup parameters, copy count and error codes of the copier are

transmitted via the interface to the remote computer in a format enabling a

representation of the data to be displayed on a display screen of the personal computer.